

City of Valdez:

# THE FUTURE

of Mariculture  
in Alaska





# Contents

3

Welcome to Valdez

4

Mariculture in Valdez

A Growing Industry

Seaweed Production:  
*An Emerging Opportunity in Valdez*

8

Environmental Analysis

10

Port of Valdez Information

Maps and Business Analysis

Resource Assessment

Cost of Business

14

Moving to Valdez

Valdez Community Livability

18

Meet Your Team



Welcome to Your Future

WELCOME TO VALDEZ, ALASKA

Nestled between towering mountains and the head of a glittering fjord in Prince William Sound, our coastal community has everything you need to live, work and play in Alaska. Arriving by sea, visitors pass massive glaciers with glimpses of marine wildlife along the way. Air travelers enjoy a birds-eye view of the soaring Chugach Mountains. But, many locals will argue a road trip to Valdez will boast the best views of all — a winding, scenic drive through the renowned Thompson Pass and Keystone Canyon.

Valdez is a unique mix of tumbling tidewater glaciers, lush rainforests and iconic wildlife on both land and sea. Around every corner, a new adventure awaits. Reel in fresh salmon and halibut, hike across the “Land of Waterfalls,” or shred some of Alaska’s most pristine powder in the snowiest town in America. Looking for a more leisurely adventure? Immerse yourself in our rich mining and gold rush history at the local museum; peruse our town’s eclectic art scene at local shops and First Friday Art Walks; savor local eats and libations; and learn about our Indigenous heritage at the Maxine & Jesse Whitney Museum.

Valdez was first known as Suacit and has long been home to the Alutiiq people. The rich culture and heritage of Alaska’s First People courses through the town, enriching the community.

The Port of Valdez is the United States’ northernmost, ice-free port with access to Alaska’s Interior, the U.S. Pacific Northwest, Northern Canada, and Pacific Rim trade routes. Our port is conveniently located in close proximity to Alaska’s road system, the Alaska Marine Highway System, and sits at the southern terminus of the trans-Alaska oil pipeline, providing unlimited access to the state and beyond.

Our town plans to further expand our maritime portfolio with the construction of Sea Otter Park, a brand new, state-of-the-art industrial park including a commercial boat dock, utilidors for fish and kelp offloading, and several acres dedicated to vessel maintenance.

The City of Valdez is not only committed to providing an unforgettable experience for our residents and visitors, we are committed to ensuring our town’s prosperity for years to come. Whether you travel to Valdez to learn about its history, fly down a mountain on a heli-skiing tour, or to expand your business to our soon-to-come Sea Otter Park, we hope you will find a reason to stay. Valdez is the ideal location to both work and play.



## Mariculture in Valdez

# A GROWING INDUSTRY

Alaska has more than 30,000 miles of clean, pristine, and nutrient-rich coastline, which produces over 50 percent of America’s seafood production. However, aquatic plants and shellfish represent a significant, sustainable and underdeveloped economic opportunity for coastal Alaska communities, like Valdez. The Alaska Governor’s Mariculture Task Force has implored the state’s business leaders and policymakers to take the steps necessary for Alaska’s burgeoning mariculture industry to reach its full potential. Inspired by a group of former Valdez city officials and former Alaska Gov. Bill Walker’s establishment of the Alaska Mariculture Task Force in 2016, Task Force participants endeavored to craft Alaska’s Mariculture Development Plan, which resulted in several high-priority recommendations, including:

- Secure (shellfish and aquatic plant) seed supply through the development of hatcheries;
- pass state legislation to help fund hatcheries through Alaska’s Mariculture Revolving Loan Fund and to allow for shellfish enhancement;
- establish an Alaska Mariculture Development Council;
- establish a mariculture research center at the University of Alaska; and,
- fill key federal (NOAA) and state (Alaska Sea Grant) positions to enable the growth of the industry.

Five years following former Gov. Walker’s foundational Administrative Order, many of these goals have been achieved, with meaningful progress towards the remainder. With the sunset of the Task Force on June 30, 2021, the Task Force was charged with authoring a definitive report summarizing the Alaska Mariculture Development Plan (AMDP), including both its promise and remaining challenges.

Going forward, effective implementation of this comprehensive plan will require coordination and commitment of time and resources from local, state, federal and Tribal governments, industry, the university system, and other interested stakeholders. You will not find this cooperation represented among Alaska’s coastal communities so fully as it is in Valdez and the broader Prince William Sound community. Valdez possesses the coordination and leadership recommended by the Task Force as a guiding principle of the AMDP.

Development of mariculture in this region will need to be compatible with the state’s commitment to sustainability and its principles to maintain and improve environmental integrity, as required by Alaska’s Constitution and Alaska Department of Fish and Game’s (ADF&G) management practices. From time immemorial, the Alaskan Native people of this region have considered Valdez as a favorite place to hunt, fish, gather, and trade. Alaska Natives and other Indigenous peoples have a long tradition of living sustainably with the natural world by understanding the importance of preserving natural resources and respecting the interdependence of all living things. Sustainability is interwoven with the fabric of Valdez’s history and culture.

Paramount to the plan’s guiding principles is assurance of Alaska Native participation and leadership in the development of Alaska’s mariculture industry. At the strongest recommendation of the Task Force, mariculture development in Alaska will include and encourage the involvement of Alaska Native people in every element of the process. Together with the Valdez Native Tribe, the City of Valdez will strive to work cooperatively with the seven Chugach Tribes to develop and support mariculture stakeholders in the region, including stakeholders residing in Suacit (Valdez), Taatiillaaq (Tatitlek), Katuwaq (Cordova), Ingimatya (Chenega), Qutalleq (Seward), Paluwik (Port Graham), and Nanwalek.

Alaska presents many unique challenges, and mariculture developers will look globally to relevant research and solutions to apply to Alaska’s circumstances and geography. Valdez has long been a center for innovation in both energy circles and fisheries.

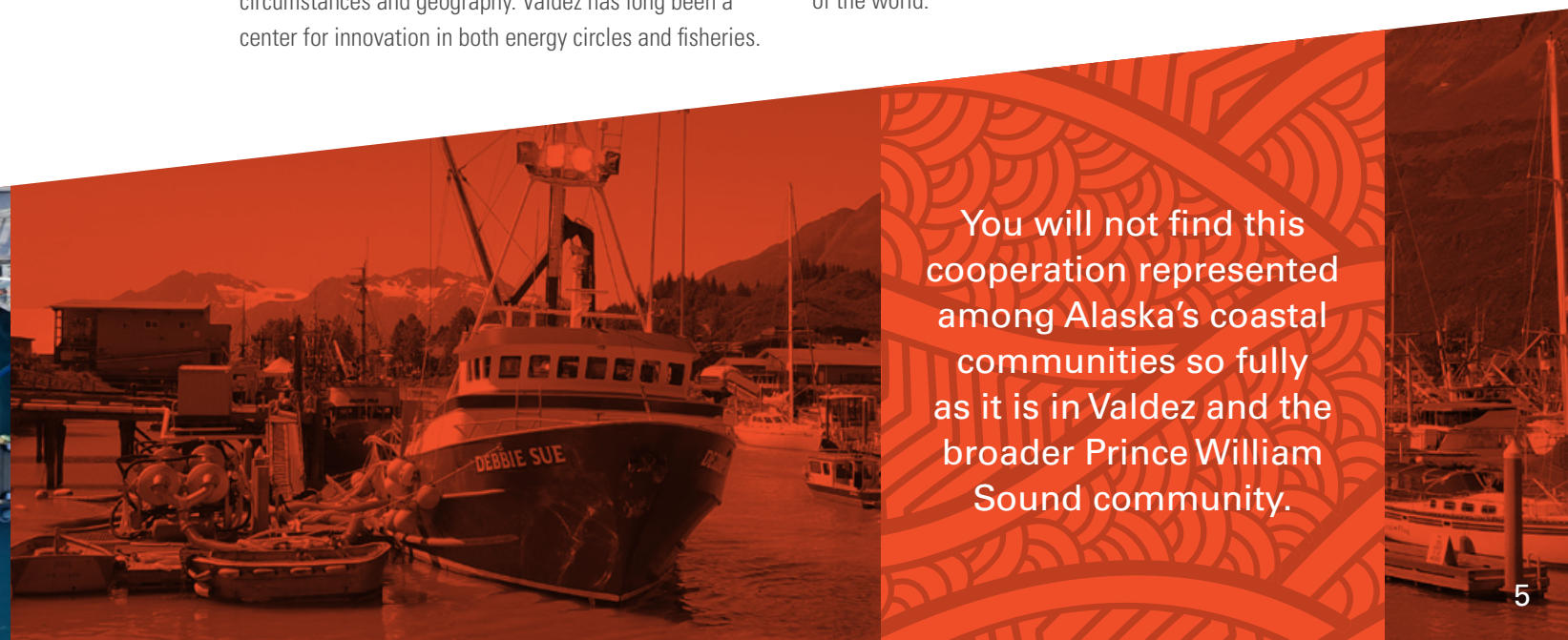
The trans-Alaska Pipeline System, with its terminus in Valdez, is an engineering marvel that has moved over 18 billion barrels of oil since its construction in 1977. Valdez’s own Solomon Gulch Hatchery is looked at throughout the state as a model for aquaculture leadership and innovation. Educational innovation, such as those found through Prince William Sound College and Prince William Sound Science Center, will no doubt take lead roles in the training of a mariculture workforce and furtherance of applied research to ensure the sustainable development of the industry.

Implementation of the AMDP will require that stakeholders protect existing marine uses, such as subsistence, commercial fishing, and recreation. The Task Force has also recommended stakeholders utilize existing Alaska assets and infrastructure.

Valdez is uniquely and favorably positioned to be among the state’s leading communities in this growing industry for a number of reasons. Valdez’s geographical location and access to both an ice-free port and the North America road system is unique among coastal Alaska communities. The communities’ financial standing is enviable and over the years has catalyzed innovation in the seafood industry. The cost of doing business in Valdez is highly competitive among coastal Alaska communities. And, as its residents and visitors can attest to, Valdez is highly livable and an attractive place to do business.

Valdez is striving to make Alaska the mariculture capital of the world.

You will not find this cooperation represented among Alaska’s coastal communities so fully as it is in Valdez and the broader Prince William Sound community.







## Seaweed Production AN EMERGING OPPORTUNITY IN VALDEZ

Seaweed is a \$6 billion global industry producing more than 70 billion pounds of wet-weight harvest annually.

To put this into context, this harvest weight is more than quadruple global salmon harvests, including both wild capture and aquaculture production. The United States is a relatively small seaweed producer and a moderate seaweed consumer in the global marketplace, with Americans importing 95% of its edible seaweed, most of which comes from farms in a handful of east Asia countries.

Alaska's seaweed industry is currently very modest in size, with only a handful of growers with a few years of operating experience and limited retail offerings produced by a small number of companies. However, potential growers entering and emerging from permitting processes is growing rapidly, and the potential for seaweed production in the state is immense. To achieve this potential, the developing Alaska seaweed industry and producers will need to identify appropriate product forms, destination markets, and cost structures that are viable in Alaska.

Alaska Fisheries Development Foundation (AFDF), with grant support from the Pacific States Marine Fisheries Commission, recently contracted with McKinley Research Group to assess current and potential markets for Alaska seaweed. Recommendations put forth by AFDF and McKinley include:

Alaska and its communities should strive to attract major anchor firm(s) to the state to create product demand and to act as an industry seed. Stakeholders are encouraged to identify business accelerators, venture opportunities, key government research programs, and other opportunities to accelerate growth.

Alaska and its communities should work with private and public researchers to reduce farming cost structure, improve processing technology, and support product development.

Alaska and its communities should create coordination opportunities for industry players, including potential funders, growers, processors, and scientists. It will be important to identify key policy initiatives, ranging from funding to science to regulatory structures, and to address these needs collaboratively.

Alaska and its communities should catalog existing infrastructure and businesses critical to the industry, and strategically invest in regional infrastructure and linkages, drawing on existing capacity wherever possible.

Alaska and its communities are encouraged to ensure the state is attractive to and on the radars of key players in blue carbon, biofuels, bioplastics, and protein replacement efforts. Stakeholders should partner with firms and/or nongovernmental organizations (NGOs) to quantify the carbon sequestration potential for Alaska seaweed.

Valdez stakeholders and others believe the community is an attractive option for firms to consider as they explore prospective locations for shoreside processing and associated services.





# Environmental Analysis

Although the Exxon Valdez oil spill of 1989 was an environmental and social catastrophe unlike any other experienced in the Prince William Sound region, peer-reviewed studies have shown oil is no longer bioavailable in the area, and there are no lingering effects on key ecosystems. A National Oceanic and Atmospheric Administration (NOAA) study in 2013 assessed fish and shellfish harvests in Alaska Native communities throughout the spill-affected region and found them to be healthy and of no concern for human consumption. Prince William Sound seafood is synonymous with quality, including the state’s most successful salmon aquaculture program, and an established and highly regarded oyster aquaculture industry. There should be no doubt that similar results await those who farm kelp and seaweed in its many protected bays and fjords.

Prince William Sound is a semi-enclosed fjord estuary on the southern coast of Alaska along the Gulf of Alaska. It contains 14 Alaska state parks and is characterized by the Alaska Department of Natural Resources as “remote fjords, bays, coves, lakes, glaciers, mountains, and hundreds of islands that provide a rich and unspoiled beauty.” The sound is completely encompassed by the Chugach National Forest, further establishing this region as highly valued by society due to its unique characteristics, abundant and magnificent wildlife, commercially important resources, and pristine condition.

Prince William Sound covers more than 9,000 square kilometers, with steep shorelines frequently dropping from narrow beach shelves to depths of more than 800 meters. The central sound is approximately 60 kilometers by 90 kilometers in width, with depths typically greater than 200 meters. Numerous islands are scattered throughout the sound, and bays, fjords, and many glaciers may be found along its rugged coastline. The Prince William Sound ecosystem is characterized by a diversity of animal and plant populations and by significant variability in abundances that occurs, inter-annually, seasonally, and spatially.

The Prince William Sound climate is maritime, with high precipitation, occasional strong winds, and relatively moderate temperatures given its high latitude. Often referred to as “The Pond” by Alaska commercial fishers, its sheltered nature lends itself to aquaculture and commercial and recreational fishing activities. It’s an important feature of the Gulf of Alaska ecosystem, acting as both a source and sink for suspended and dissolved materials. A significant supply of fresh water enters the gulf from river discharges along the coast of Southeast Alaska and the Copper River to the immediate east of Prince William Sound, and subsequently enters the sound through Hinchinbrook Entrance. For comparison, the annual discharge of fresh water into the Gulf of Alaska is slightly greater than the Mississippi River into the Gulf of Mexico. All of these characteristics are compatible with marine aquaculture of shellfish and aquatic plants.



Prince William Sound serves as an important nursery for forage fish, such as salmon fry (pink, chum, sockeye, coho, and chinook salmon), Pacific herring, sand lance, and capelin. Larger fish include the aforementioned Pacific salmon species, along with Pacific cod, pollock, rockfish, halibut, arrowtooth flounder, sablefish, various sharks, and other fish species. It is also home to a myriad of marine birds, such as common murre, marbled murrelet, several cormorant species, black-legged kittiwakes, and many other species of tern- and gull-like birds. Notable marine mammals in Prince William Sound include sea otters, harbor seals, Steller sea lions, orcas, harbor porpoises, and humpback and sei whales. Numerous species of invertebrates and shellfish species inhabit the sound, including commercially significant populations of crab and shrimp.

Located adjacent and immediately to the northeast of Prince William Sound proper, Valdez’s fishing industry has benefitted from immediate proximity to some of the state’s most productive fisheries. Valdez Arm supports the largest recreational fishery in Prince William Sound, and the largest coho and pink salmon sport fisheries in the state. Further, pink salmon returns to Port Valdez support the largest commercial pink salmon fishery in the state, and in 2015, over 140 million pink salmon returned to the sound in what is a record single-area salmon return in the history of the state.

The headwaters of Port Valdez itself are not considered optimal for macroalgae aquaculture production due to glacially induced turbidity, although some of the sound’s most productive salmon streams may be found in sheltered, clear water embayments in nearby Jack (9 miles away), Sawmill (12 miles), and Galena (14 miles) bays. Chugach Regional Resources Commission (CRRC) and the Native Village of Tatitlek are outplanting kelp in 2021 nearly 20 miles to the south of Valdez, and it’s expected there are numerous prospective growout sites located between the two communities. The Native Village of Eyak and several other kelp and seaweed farmers are permitted to grow macroalgae 30 miles to the south of Valdez, with at least two farms outplanting kelp in October 2021. Both CRRC and the Native Village of Chenega will be outplanting kelp approximately 75 miles to the southwest of Valdez near Chenega. Prince William Sound is witnessing one of the most active expansions in aquatic farm permit applications in the state, with all expectations this trend will continue if not increase in the coming years. All prospective Prince William Sound aquatic farm sites fit within the footprint of sound’s iconic salmon fishery, which can result in vessel deliveries within hours of being harvested, and certainly within a period of time to ensure excellent quality of mariculture products.

Valdez and Prince William Sound constitute an internationally significant center of salmon aquaculture with settings and resources that lend themselves equally well to mariculture development and both kelp and seaweed production.

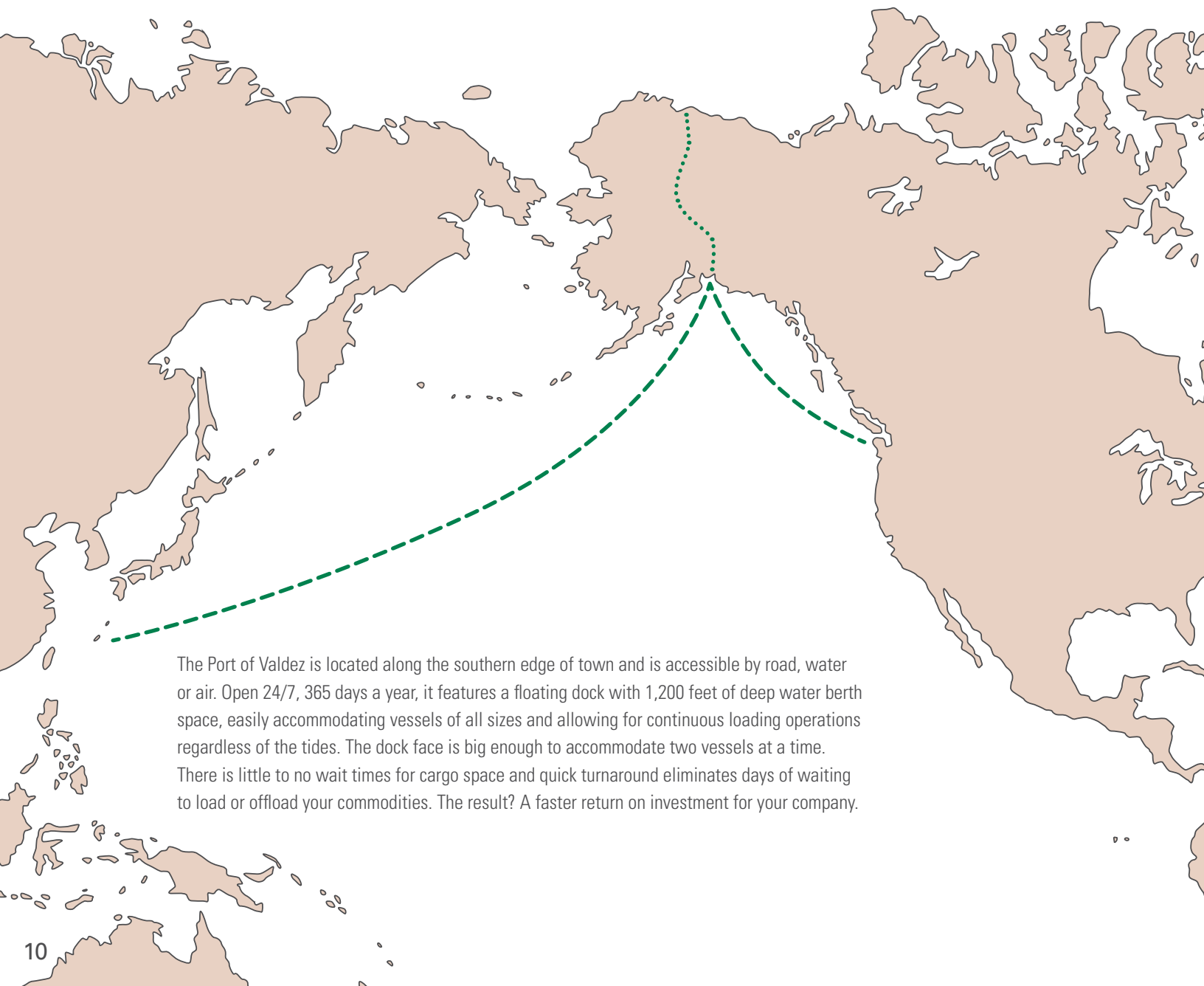




# Port of Valdez INFORMATION

Having a port that meets your demands and grows with your business is crucial to any industry, let alone the fastest growing aquaculture sector. We know the current state of seaweed farming and kelp production is only the beginning, much like the current infrastructure and expansion plans for the Port of Valdez and Sea Otter Park.

From the open waters of the Gulf of Alaska, through the depths of the Valdez Arm, the Port of Valdez is a world-class port with unexplored logistical opportunities. This ice-free, natural and deep-water port is geographically protected and strategically located for export into Asia and import into northern and Interior Alaska.



The Port of Valdez is located along the southern edge of town and is accessible by road, water or air. Open 24/7, 365 days a year, it features a floating dock with 1,200 feet of deep water berth space, easily accommodating vessels of all sizes and allowing for continuous loading operations regardless of the tides. The dock face is big enough to accommodate two vessels at a time. There is little to no wait times for cargo space and quick turnaround eliminates days of waiting to load or offload your commodities. The result? A faster return on investment for your company.



The port has robust LED lighting and paved uplands to provide safe and efficient operations by expert stevedores, 400-500 dedicated reefer plugs and state-of-the-art electrical hook-ups and back-up generator systems to ensure refrigeration units stay cold.

There is also high-speed broadband internet enabling uninterrupted communication required to interact with supply chains and customers.

The newest expansion to the Port of Valdez will be Sea Otter Park, located on the spit south of the Small Boat Harbor within a busy industrial area, including seafood plants and the Alyeska Ship Escort/Response Vessel System facility. Sea Otter Park is expected to feature 5 acres of fill expansion, intended for lease to seafood processors, and construction of a 550-foot bulkhead dock. It also includes a 60-foot access corridor from South Harbor Road to the proposed bulkhead dock.

A new travel lift will be built to serve vessels up to 150 tons with a wave barrier to protect it. The uplands will consist of washdown facilities, a water treatment system, vessel work areas, lease space, and a vessel laydown area.

Over the next five, 10, then 30 years, Sea Otter Park and the Port of Valdez are set to become Alaska's premier port and processing location. It's time to re-evaluate your shipping route.





# STRENGTHS AND OPPORTUNITIES

The geographic location of the Port of Valdez is its biggest strength and draw for expanded business. Valdez is Alaska's farthest north, ice-free port, giving any businesses who use this port a strategic advantage compared to the rest of Alaska. This allows business to proceed as usual 365 days a year.

The port and industrial park are also easily accessible by road, water or air. Valdez sits at the southern end of the Richardson Highway, Alaska's primary shipping route. The highway runs north to Fairbanks or connects to run southwest to Anchorage, allowing clear access to Alaska's entire road system.

Valdez is also a stop along the Alaska Marine Highway System, a ferry system connecting many of Alaska's coastal communities in the Southeast arm of the state and into Prince William Sound.

Pioneer Field is Valdez's regional airport, with a 6,500-foot-long runway, capable of serving large airplanes. Ravn Alaska provides daily flights in and out of Valdez. The community is just a short 45-minute trip from Anchorage.

Despite being so accessible, the port is also geographically protected at the north end of a fjord within Prince William Sound and surrounded by the Chugach Mountains.

Sea Otter Park and Port of Valdez are entering a new era of industrial excellence. However, this expansion is expected to roll out in stages over the next few decades, meaning time is still needed to fully expand Sea Otter Park infrastructure and prepare it to begin help processing.

However, this allows processors to get in from the ground-up by being first to this expansion. As the industrial park introduces new and improved infrastructure, companies who lease early will be able to provide input and help make Sea Otter Park the most functional for your business.

We do expect high demand for this limited lease space on Alaska's premier port. Once leases on these locations start, we expect them to fill quickly.

We also expect this port expansion to open the door for more opportunities for cruise ship routes. As the City of Valdez continues to expand, we do expect to see more water traffic.

The port and industrial park are easily accessible by road, water or air.

# ESTIMATED COSTS OF BUSINESS

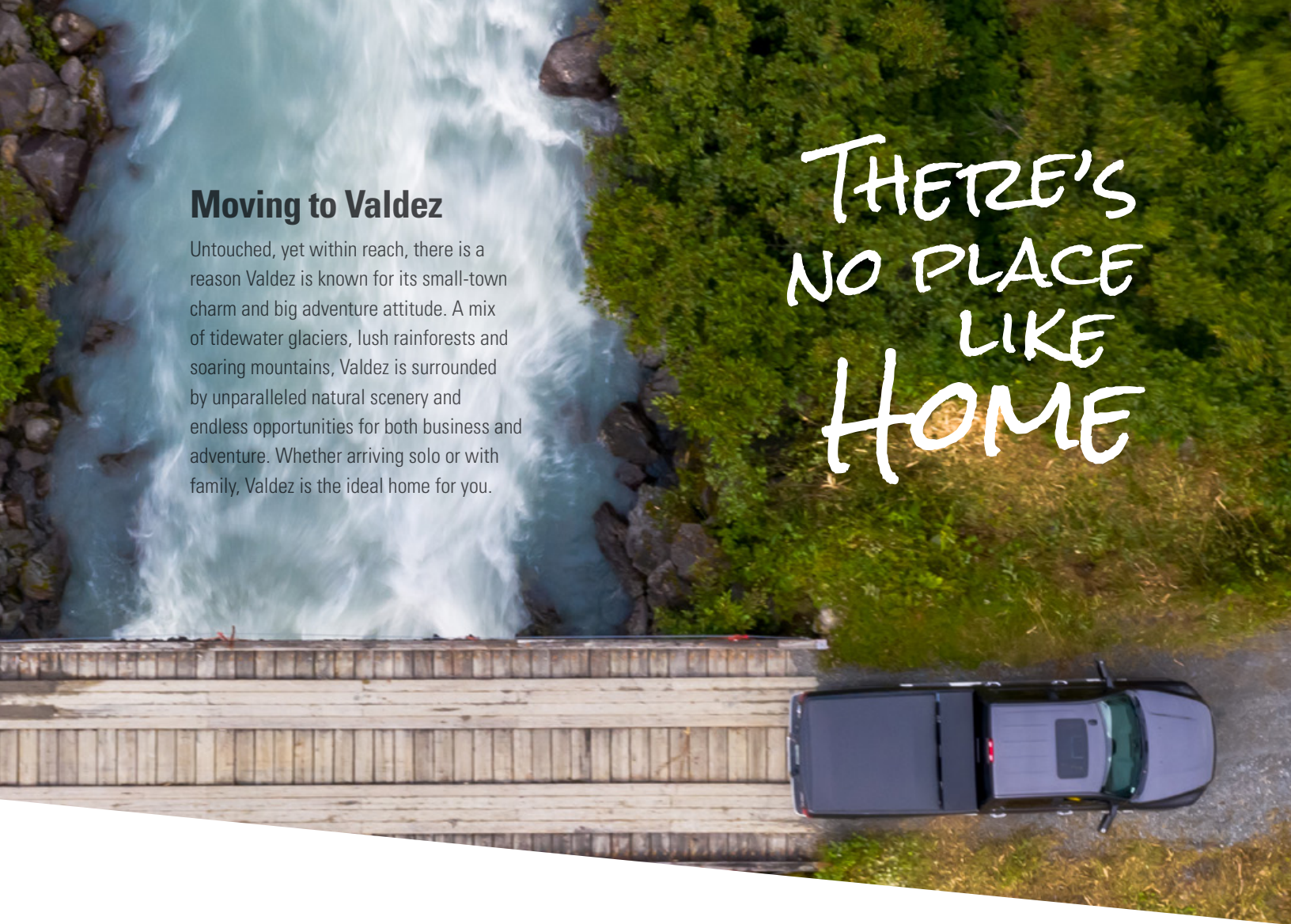
The Port of Valdez/City of Valdez has around 600 acres of city-owned light industrial land and over 1,000 acres of city-owned heavy industrial land. These properties are available at 10% of the assessed value annually, with options to negotiate for new industries. These rates are well below market rate, as well as commercial utilities. The Port of Valdez has the lowest rate average in the region, nearly a third of the cost of major competitors.

Building permit fees range from \$5-\$40 based on project valuation. Water connection is \$100 and sewer connection maxes out at \$500. In 2013, City Council waived all other planning department fees. This simply means Valdez has no application fees for leases, land-use permits, right-of-way permits, businesses registrations, etc.

Valdez does require a State of Alaska business license and City of Valdez business registration to operate, but there is no fee and the application approval process is minimal.







# Moving to Valdez

Untouched, yet within reach, there is a reason Valdez is known for its small-town charm and big adventure attitude. A mix of tidewater glaciers, lush rainforests and soaring mountains, Valdez is surrounded by unparalleled natural scenery and endless opportunities for both business and adventure. Whether arriving solo or with family, Valdez is the ideal home for you.

THERE'S  
NO PLACE  
LIKE  
HOME

# A look back at where it all began

Our small town's rich history has shaped our community and played an important role in the development of Alaska. Valdez has long been home to the Alutiiq people and it is their contributions to our land that have allowed our town to become what it is today. Come the winter of 1898, our population grew when gold seekers trekked to Valdez chasing promises of gold and fortune. Though no gold was found, many gold seekers were captivated by the area's beauty and decided to stay.

Fort Liscum was established in the early 1900s to serve several purposes, including maintaining law and order among the growing population and to establish a military road and telegraph line to the Interior. Then, in 1969, Valdez was selected as the terminus of the trans-Alaska Pipeline System, establishing our town as an oil/transfer marine terminal. It is Valdez's early beginnings that laid the foundation for transportation within the state and has served as the gateway to Prince William Sound and Alaska's Interior. Valdez has since become a diverse community supported by the pipeline, all-season tourism, fishing, transportation and shipping.

# Adventure awaits

Valdez is a premier destination for outdoor enthusiasts with endless adventures and places to explore, both in winter and summer.

Come winter, the nearby Thompson Pass becomes the snowiest place in the nation, recording an average of 500 inches of snow per year, and offers every winter activity imaginable. From downhill and heli-skiing, sledding, fat tire biking, snowshoeing, cross-country skiing, snow machining, ice climbing, ice fishing and everything in between, there is an abundance of activities to choose from and locals will surely never grow bored. Not to mention, Valdez is a great destination to view the aurora borealis or northern lights. Getting the opportunity to view this grand spectacle is a once-in-a-lifetime experience and one our residents never grow tired of seeing.

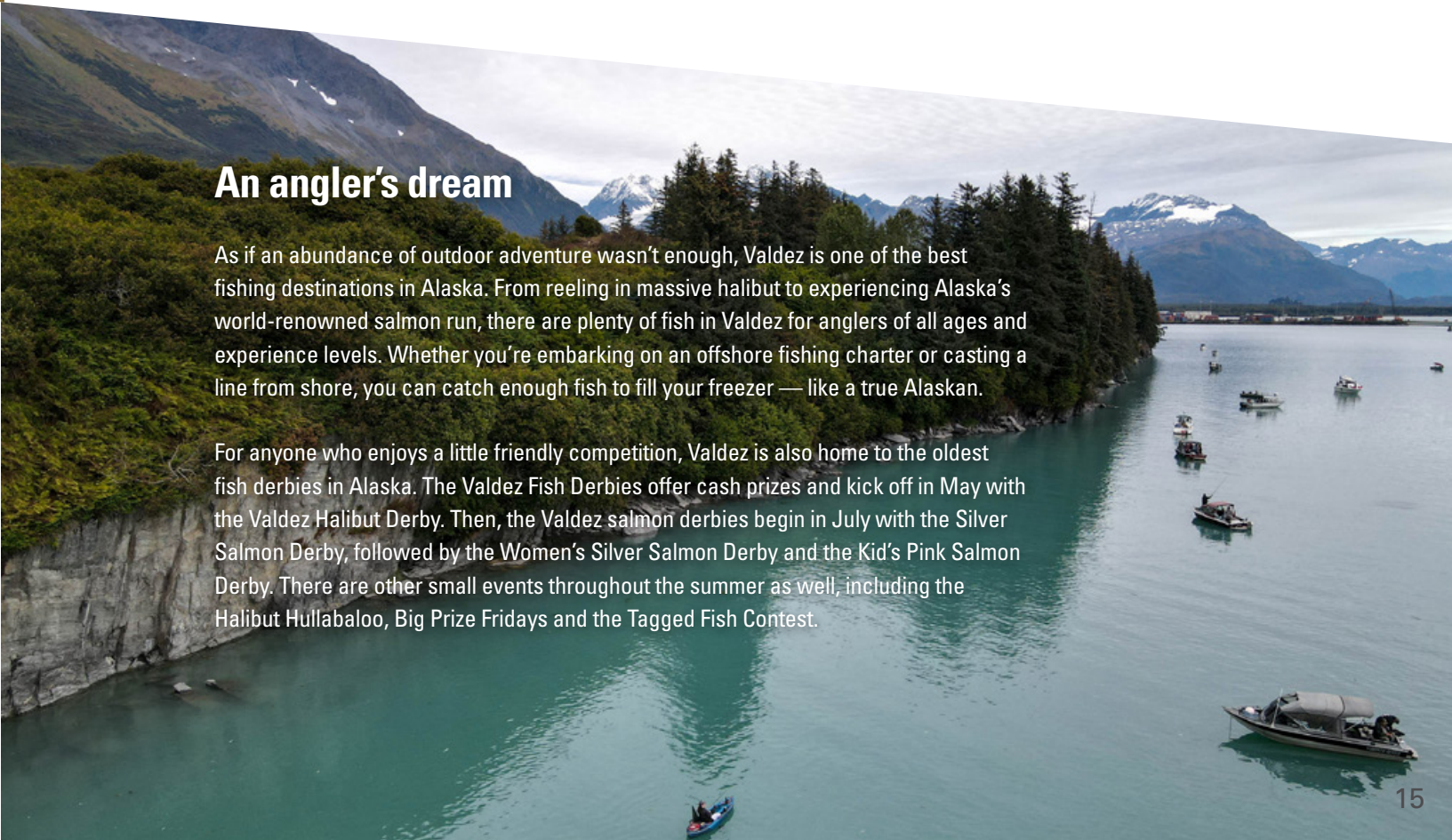
As the winter snow begins to melt, icy mountain sides turn into cascading waterfalls and the town once covered in a blanket of white turns into lush greens and vibrant blues. The days grow longer, leaving plenty of time for locals to explore under Alaska's midnight sun. Just as in winter, the opportunities for exploration in the summer are endless. From hiking, kayaking, rafting, rock climbing, fishing, boating, biking, flightseeing, wildlife viewing and so much more, Valdez truly has something for everyone no matter the season.



# An angler's dream

As if an abundance of outdoor adventure wasn't enough, Valdez is one of the best fishing destinations in Alaska. From reeling in massive halibut to experiencing Alaska's world-renowned salmon run, there are plenty of fish in Valdez for anglers of all ages and experience levels. Whether you're embarking on an offshore fishing charter or casting a line from shore, you can catch enough fish to fill your freezer — like a true Alaskan.

For anyone who enjoys a little friendly competition, Valdez is also home to the oldest fish derbies in Alaska. The Valdez Fish Derbies offer cash prizes and kick off in May with the Valdez Halibut Derby. Then, the Valdez salmon derbies begin in July with the Silver Salmon Derby, followed by the Women's Silver Salmon Derby and the Kid's Pink Salmon Derby. There are other small events throughout the summer as well, including the Halibut Hullabaloo, Big Prize Fridays and the Tagged Fish Contest.





### A day around town

After exploring the outdoors, locals can take a moment to slow down at breweries, restaurants and coffee shops. Downtown and the harbor are easily walkable with many businesses and activities located only a few blocks from accommodations. Coffee connoisseurs don't fret — although a small town, Valdez is home to more coffee shops than gas stations or bars, so you'll never run out of fuel. For a leisurely day in town, stroll along the city streets, immerse yourself in the city's history and culture at the Valdez Museum or The Maxine and Jesse Whitney Museum, admire local art or visit the Solomon Gulch Fish Hatchery to view the returning salmon and to wildlife like seals, sea lions and bears.



### You're invited to Valdez's most exciting events

As a small Alaska town, Valdez is a close-knit community. Locals and visitors alike are welcomed with open arms and gather throughout the year for our community's exciting annual events. Our thrilling winter festivities include the Valdez Ice Climbing Festival, Mayor's Cup Snowmachine Race, Snowkite Festival and the Fat Bike Festival, to name a few.

In the summer, people visit Valdez for the Valdez Fly In & Air Show, the Last Frontier Theatre Conference, to give back to the community during Gold Rush Days and to enjoy local music and art at Richardson Highway Rendezvous.

### School is in session

For young Valdez residents, the Valdez City School District is dedicated to providing every student with a quality education. The district's mission is to instruct, inspire and empower students in a safe environment by offering a challenging curriculum across all four schools: Hermon Hutchens Elementary, Gilson Middle School, Valdez High School and Valdez Homeschool Program. Students enjoy a rich educational experience from Pre-Kindergarten to 12th grade through excellent academic and extracurricular opportunities.

For students pursuing higher education or adults seeking lifelong learning opportunities, Valdez is also home to Prince William Sound College. PWSC is a two-year, one-of-a-kind institution of higher education set in some of the state's most stunning scenery. PWSC is accredited by the Northwest Commission on Colleges and Universities through the University of Alaska Anchorage. It offers general studies degrees, associate degrees and occupational certificates.

With no out-of-state tuition, PWSC makes attending college affordable. It's small student population is composed of local, out-of-state and international students, distance learners, rural students, and resident students living in local housing. Small class sizes, a close-knit campus and one-on-one interaction with educators shape a unique learning experience for all students.

### Get out of town

As the country's biggest state, there is so much to explore outside of Valdez. Whether traveling by ferry, plane or car, Anchorage and Fairbanks are easily accessible from Valdez. Valdez is also in close proximity to Cordova, Whittier and Glennallen, as well as St. Wrangell Elias National Park, the largest national park in America.



## WELCOME HOME

A perfect place to work hard by day and go in search of the next awe-inspiring adventure by evening, our town truly is one of the best places to live in Alaska.



# Meet your team

One of the biggest advantages of doing business in Valdez is the dedicated and knowledgeable people at the City and Port who are excited to make Valdez the next mariculture hot spot in Alaska.

## Sharon Scheidt

Mayor  
City of Valdez

## Mark Detter

City Manager  
City of Valdez

## Jeremy Talbott

Ports and Harbors Director  
City of Valdez

## Tommy Sheridan

City of Valdez Mariculture Consultant  
Sheridan Consulting

## Martha Barberio

Economic Development Director  
City of Valdez

## Anna Bateman

Administrator  
Valdez Native Tribe

## Kate Huber

Planning Director  
City of Valdez

## Ryan Sontag

Operations Manager  
North Star Terminal and  
Stevedore, LLC

## Nathan Duval

Capital Facilities Director and  
Assistant City Manager  
City of Valdez

# References

Apeti AD, Hartwell SJ, Myers SM, Hetrick J, Davenport J. 2013. Assessment of contaminant body burdens and histopathology of fish and shellfish species frequently used for subsistence food by Alaska Native communities. North Pacific Research Board Project Final Report. NOAA Technical Memorandum NOS/NCCOS 173. Silver Spring, MD. 62 pp.

[ADFG] Alaska Department of Fish and Game. 2016. Fishing in the Valdez area: recreational fishing series. Sport Fish Division, Anchorage, AK. 6 pp.

Alaska Mariculture Task Force. 2021. Final Report of the Alaska Mariculture Task Force to Governor Dunleavy. Funded in part by NOAA Award #NA19NMF4270027. 169 pp.

<https://www.afdf.org/wp-content/uploads/Mariculture-Task-Force-Report-to-Gov-Final-compressed.pdf>

Hartwell MA, Gentile JH, Cummins KW, Highsmith RC, Hillborn R, McRoy CP, Parrish, Julia, Weingartner T. 2010. A conceptual model of natural and anthropogenic drivers and their influence on the Prince William Sound, Alaska, ecosystem. Human and Ecological Risk Assessment 16: 672–726.

Knudsen E, Rand P, Gorman K, McMahon J, Adams B, O’Connell V, Bernard DB. 2016. Interactions of wild and hatchery pink salmon and chum salmon in Prince William Sound and southeast Alaska. Progress Report for 2015 for Alaska Department of Fish and Game. Contract IHP-13-013. 293 pp.

McDowell Group. 2018. Economic impact of Alaska’s salmon hatcheries. Anchorage, AK. 39 pp.

McKinley Research Group. 2021. Alaska Seaweed Market Assessment. 79 pp.

State of Alaska. 2018. Alaska Mariculture Development Plan. Funded in part by NOAA Award #NA14NMF4270058. 82 pp.

<https://www.afdf.org/wp-content/uploads/Alaska-Seaweed-Market-Assessment-2021-08-FINAL.pdf>

[SOA] State of Alaska. 2018. Alaska Mariculture Development Plan. Funded in part by NOAA Award #NA14NMF4270058. 82 pp.  
[http://www.adfg.alaska.gov/Static/fishing/pdfs/mariculture/ak\\_mariculture\\_devplan\\_06-29-18.pdf](http://www.adfg.alaska.gov/Static/fishing/pdfs/mariculture/ak_mariculture_devplan_06-29-18.pdf)



